

10/567548

IAP20 Rec'd PCT/PTO 08 FEB 2006

Attorney's Docket No. OMY-0058

**AN ENGLISH TRANSLATION OF THE ANNEXES OF THE  
INTERNATIONAL PRELIMINARY EXAMINATION REPORT**

(Amended Claims under Article 34)

International Application No.: PCT/JP2004/006396

Applicant: Takashi Yoshimine

Title: CONVERSATION ASSITING DEVICE AND CONVERSATION  
ASSITING METHOD

Rader, Fishman & Grauer PLLC

**Claims amended according to PCT Article 34**

What is claimed is:

1. **(Amended)** A conversation support apparatus,  
5 comprising:

picture capture means for capturing pictures of a  
first user and a second user;

first conversion means for converting first  
picture information of the first user, whose picture  
10 has been captured, into first information that the  
second user is capable of perceiving;

second conversion means for converting second  
picture information of the second user, whose picture  
has been captured, into second information that the  
15 first user is capable of perceiving;

a first main body, having a first display screen  
for displaying the first information which has been  
converted;

a second main body, having a second display screen  
20 for displaying the second information which has been  
converted and also capable of displaying the first  
information; and

a connection mechanism for connecting the first  
main body and the second main body so that the first  
25 display screen and the second display screen is capable  
of being placed at an angle different from each other.

2. The conversation support apparatus as set forth in

claim 1, further comprising:

sound collection means for collecting sound of the first user; and

5 third conversion means for converting the collected sound into the first information.

3. The conversation support apparatus as set forth in claim 1,

10 wherein the first conversion means converts the first picture information into one of character information and sign information as the first information.

4. The conversation support apparatus as set forth in claim 1,

15 wherein the first conversion means converts the first picture information into sound information as the first information, and

wherein the conversation support apparatus further comprises:

20 output means for outputting the converted sound information.

5. **(Canceled)**

6. **(Amended)** The conversation support apparatus as set forth in claim 1,

25 wherein the first display screen displays the second information nearly in synchronization with timing the second display screen displays the second information.

7. **(Amended)** The conversation support apparatus as set forth in claim 3,

wherein when the first conversion means converts the first picture information into character  
5 information and sign information, the first display screen displays the sign information, which has been converted by the first conversion means, and

wherein the second display screen displays the character information, which has been converted by the  
10 first conversion means, nearly in synchronization with timing the first display means displays the sign information.

8. The conversation support apparatus as set forth in claim 2, further comprising:

15 measurement means for measuring a sound pressure level or a noise level of sound of the first user;

setting means for setting a threshold value of the sound pressure level or the noise level; and

execution means for causing the third conversion  
20 means to execute a conversion process when the measured sound pressure level or noise level is equal to or larger than the threshold value.

9. The conversation support apparatus as set forth in claim 2, further comprising:

25 measurement means for measuring a sound pressure level or a noise level of sound of the first user;

setting means for setting a threshold value of the

sound pressure level or the noise level; and

execution means for causing the first conversion means to execute a conversion process when the measured sound pressure level or the noise level is equal to or  
5 larger than the threshold value.

10. The conversation support apparatus as set forth in claim 3, further comprising:

storage means for correlatively storing a plurality of picture patterns of lips of a person who  
10 pronounces sound and character information corresponding to sound that the person pronounces,

wherein the picture capture means captures a picture of the lips of the first user as the first picture information, and

15 wherein the first conversion means has:

picture pattern comparison means for comparing the captured picture information and each of the picture patterns,

picture pattern selection means for selecting one  
20 picture pattern corresponding to the captured lip picture information from the picture patterns corresponding to the compared result, and

character information extraction means for extracting the character information corresponding to  
25 the selected picture pattern.

11. The conversation support apparatus as set forth in claim 10,

wherein the storage means correlatively stores the picture patterns of each of the plurality of people and the character information and stores lips shape patterns of each of the plurality of people, and

5            wherein the conversation support apparatus further comprises:

         shape pattern comparison means for comparing the captured lip picture information and the shape patterns, and

10           shape pattern selection means for selecting a shape pattern that is the most similar to the captured lip picture information from the shape patterns corresponding to the compared result.

12. The conversation support apparatus as set forth in  
15           claim 3, further comprising:

         storage means for correlatively storing a plurality of picture patterns of lips of a human who pronounces sound and sign information corresponding to sound that the human pronounces,

20           wherein the picture capture means captures a picture of the lips of the first user as the first picture information, and

         wherein the first conversion means has:

         picture pattern comparison means for comparing  
25           information of the captured picture of the lips of the first user and the picture patterns;

         picture pattern selection means for selecting one

picture pattern corresponding to the information of the captured picture of the lips of the first user from the picture patterns corresponding to the compared result; and

5           sign information extracting means for extracting the sign information corresponding to the selected picture pattern.

13. The conversation support apparatus as set forth in claim 12,

10           wherein the storage means correlatively stores the picture patterns of each of the plurality of people and the sign information and stores lips shape patterns of each of the plurality of people, and

            wherein the conversation support apparatus further  
15 comprises:

            shape pattern comparison means for comparing the information of the captured picture of the lips of the first user and the shape patterns; and

            shape pattern selection means for selecting one  
20 shape pattern that is the most similar to the information of the captured picture of the lips of the first user from the shape patterns corresponding to the compared result.

14. The conversation support apparatus as set forth in  
25 claim 4, further comprising:

            storage means for correlatively storing a plurality of lips picture patterns of a person who

pronounces sound and character information  
corresponding to sound that the person pronounces,

wherein the picture capture means captures a  
picture of the lips of the first user as the first  
5 picture information, and

wherein the first conversion means has:

picture pattern comparison means for comparing the  
information of the captured picture of the lips of the  
first user and the picture patterns,

10 picture pattern selection means for selecting one  
picture pattern corresponding to the information of the  
captured picture of the lips of the first user from the  
picture patterns corresponding to the compared result,  
and

15 sound information extraction means for extracting  
the sound information corresponding to the selected  
picture pattern.

15. The conversation support apparatus as set forth in  
claim 14,

20 wherein the storage means correlatively stores the  
picture patterns of each of the plurality of people and  
the sign information and stores lips shape patterns of  
each of the plurality of people, and

wherein the conversation support apparatus further  
25 comprises:

shape pattern comparison means for comparing the  
captured lip picture information and the shape



patterns, and

shape pattern selection means for selecting a  
shape pattern that is the most similar to the captured  
lip picture information from the shape patterns  
5 corresponding to the compared result.

16. **(Amended)** The conversation support apparatus as  
set forth in claim 1,

wherein the connection mechanism connects the  
first main body and the second main body so that the  
10 second main body is capable of being twisted against  
the first main body and also is capable of being folded  
to the first main body.

17. The conversation support apparatus as set forth in  
claim 1, further comprising:

15 storage means for storing the first information;  
reproduction means for reproducing the first  
information stored in the storage means on the first  
display screen; and

trick play means for performing a trick play  
20 operation for the stored first information.

18. **(Amended)** A conversation support method,  
comprising the steps of:

capturing a picture of a first user and a picture  
of a second user;

25 converting first picture information of the  
captured picture of the first user into first  
information that the second user is capable of

perceiving;

converting second picture information of the  
captured picture of the second user into second  
information that the first user is capable of

5 perceiving;

displaying the converted first information on the  
first display screen of a first main body;

displaying the converted second information on a  
second display screen of a second main body connected  
10 to the first main body so that the first display screen  
and the second display screen are capable of being  
placed at an angle different from each other; and

displaying the converted first information on the  
second display screen.